M O N T A N A

Office Locations: Billings, Bozeman (2), Helena, Kalispell, Missoula

MONTANA MANUFACTURING EXTENSION CENTER (MMEC) Serving firms statewide. Affiliated with Montana State University. Contact: Steve Holland, Director, Montana State University, 313 Roberts Hall, Bozeman, MT 59717, (406) 994-3812, Fax: (406) 994-3391, Email: sholland@coe.montana.edu, Website: http://www.coe.montana.edu/mmec/

COMPANY CLIPS

SPECTEC/TIC Senses Value Of Lean Manufacturing

SPECTEC/TIC (Thunderbird International Corporation), near Emigrant, is a manufacturer of magnetic, RF (inductive proximity), hall, and other sensors including complementary signal conditioners. While most SPECTEC production is for custom ordered sensors ranging from high temperature to cryogenic applications, there are many similarities in how the products are manufactured. With the help of 20 employees, the company makes between 40 and 50 different product types each month in varying quantities.

SPECTEC anticipated order increases of up to 30 percent for the coming year. The company wanted to prepare the plant and its employees to meet increased demand with no disruption or delays. SPECTEC thought lean manufacturing practices might offer preemptive solutions to its anticipated order demand, as well as improve processes at a planned new facility. The company sent six lead employees to attend a Lean 101 workshop in the summer of 2000. The SPECTEC attendees found lean concepts very valuable, but didn't know how to apply them to a new plant. SPECTEC contacted the Montana Manufacturing Extension Center (MMEC) for help.

MMEC worked with SPECTEC to help it with both current- and future-state value stream mapping and lean implementation. The mapping tools helped to visualize process similarities, develop lean product flow around them, identify wastes or redundancies, and develop goals and growth projections through lean transformation. MMEC designed efficient manufacturing cells for the new facility. Because of its custom-order characteristic, the company also developed a combination pull/push system, identifying the places where variation becomes too great to continue pull. MMEC also worked to reduce batch sizes from nearly 300 down to 10 and establish visual FIFO (first-in/first out) lanes to provide efficient and timely movement of products. MMEC and production staff also developed an improved scheduling system.

Continued

THE MANUFACTURING EXTENSION PARTNERSHIP IN MONTANA

Manufacturing Extension Partnership (MEP) is a nationwide system of services and support for smaller manufacturers to become more globally competitive. At the heart of the system is a network of affiliated, locally-based manufacturing extension centers. Each center, like MMEC, is a partnership, typically involving federal, state, and local governments; industry; educational institutions; and other sources of expertise, information and funding support.

STATE STATS

DATA* COVERS JANUARY TO DECEMBER 2001

Number of projects completed with firms
116

Number of firms served
105

Number of firms served for the first time
58

Federal cost share for current operating year
$512,000

State/other cost share for current operating year
$1,024,000

**Data as reported from center*

DATA** COVERS JANUARY TO DECEMBER 2001

Increased sales & retained sales
$5,390,000

Client capital investment
$1,291,803

Total cost savings
$2,175,528

Job (created & retained)
29

***Source: Independent client impact survey*

For additional information, contact Dede McMahon 301-975-5020

The company embraced lean manufacturing not just for the planned facility, slated for completion in late summer 2001, but also on its active production floor. Improvements include a 50 percent decrease in lead time from order in to order out; ability to make more products in same amount of time (30 percent increase); capacity to fill more orders (40 percent increase), and fewer parts returns. The company has also seen improved flow and space gains. A surprise benefit, valued by SPECTEC but often overlooked by companies, is a lower stress level for employees due to reduced batch sizes and a 30 percent improvement in on-time delivery.

Plant P&L Provides Sure Footing For Red Oxx

Red Oxx Manufacturing makes soft-sided luggage for hunters, travelers, and outdoorsmen. The company also manufactures weight-training accessories. Located in Billings, Montana, the company currently employs less than 20 people. After receiving inspiration at a lean manufacturing class conducted by the Montana Manufacturing Extension Center (MMEC), Red Oxx's owners enlisted MMEC's assistance to devise a way of matching production capacity to customer demand, plus help them understand and control operating and employment costs.

MMEC introduced Red Oxx to a simple, short-term profit-and-loss reconciliation tool—the Plant P&L—to help track profitability and make an impact on day-to-day management decisions. The Plant P&L contains average operating and employment costs and is compared with a weekly production log to determine contribution margin. The information is stored in a historical log, giving a business health snapshot at regular intervals.

Red Oxx owners say they now know the costs for every bag type and all raw materials. Bags comprise 57 percent of the company business; thus, managing this information carries a significant impact on the company's success. Red Oxx can see performance figures long before month-end statements arrive and is proactively managing its expanding business. Charts and graphs are made using input data, which helps set expectations for production by five employees. With the help of Plant P&L, Red Oxx has increased its output by 15 percent and is improving management decisions through accurate data gathering.